



**California Building  
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TO: Docket #07-BSTD-1, 2008 Building Energy Efficiency Standards

RE: Low Infiltration Credit Verification for Installers

Currently the builder or subcontractor has to perform 100% blower door inspections if the low air infiltration credit is taken. This credit is awkward to achieve and unnecessarily requires 100% testing. First off, there is no one installer who is responsible for air infiltration. Currently, the framer installs the caulking and sealing at the plates, the insulation subcontractor installs sealant where there are insulation gaps, the plumber installs sealant around plumbing penetrations and the electrician seals the electrical penetrations. Additionally, very few installers have blower door testing equipment, so HERS inspectors are often hired for the testing but are not allowed by the Standards to sign the CF-6R. The builder or the installer is currently allowed to sign the CF-6R. If the installer is to sign the CF-6R, which installer should sign? Basically it is unclear who should sign this portion of the CF-6R.

An alternative to the 100% blower door testing has been suggested to CEC staff by CBIA. If the builder or installer does not wish to do blower door testing, then CBIA has proposed that they use a checklist, similar to the Quality Insulation Installation checklist, that certifies that they have done all of the things that would produce a well-sealed home, such as caulking around the entire sole plate and completely sealing all penetrations between conditioned and unconditioned space. An example checklist is attached. This would mean the builder or designated installer(s) would be checking the sealing of all relevant components of the home during construction rather than testing infiltration after construction, when it may no longer be feasible to find or fix many of the possible leaks.

After all subcontractors impacting air infiltration have completed their installations, a HERS rater can test the selected home within the sample group for low air infiltration using the blower door test method and complete the CF-4R. This testing should allow for 1-in-7 sampling by a HERS rater as other HERS credits do.

CBIA would like the CEC to clarify the signature requirements for low air infiltration. CBIA also proposes a sample checklist that builders or installers would be allowed to complete as an alternative to blower door testing if low air infiltration is taken for compliance credit.

Sincerely,



Michael G. Hodgson  
Chair, CBIA Energy Committee



Robert E. Raymer  
Technical Director, CBIA

cc: Jackalyne Pfannenstiel, Chair and Presiding Member, CEC  
Arthur H. Rosenfeld, Commissioner and Associate Member, CEC  
Bill Pennington, Buildings and Appliances Office, CEC  
Mazi Shirakh, Buildings and Appliances Office, CEC

## ***CF6R Rough Inspection Checklist***

### **Rough Frame inspection**

#### **Sole plate**

- ☒ Rope caulk or caulking bead around the entire sole plate of the home

#### **Top Plate**

- ☒ All electrical penetrations from conditioned to non conditioned are sealed with foam
- ☒ All piping penetration from conditioned to non conditioned spaced are sealed with foam

#### **Walls**

- ☒ All gaps around the windows are caulked
- ☒ Any other penetrations or cracks to the exterior of the home are sealed with foam, caulk or an approved sealant

#### **HVAC**

***Ensure that the following is sealed with an approve UL 181 mastic or tape:***

#### **Duct work**

- ☒ Can seams

- ☒ Returns seams
- ☒ Return collars
- ☒ Duct collars
- ☒ Duct boards or T wyes

### **Furnace**

- ☒ FAU seams
- ☒ FAU door
- ☒ Refrigeration lines
- ☒ Coil box seams
- ☒ Condensation line
- ☒ Manual dampers (if present)

## **Blower Door Final inspection checklist**

### **Ceiling Penetrations**

- ☒ All HVAC register cans are sealed to the drywall with caulking or an approved sealant
- ☒ All returns are sealed to the drywall
- ☒ All lighting fixtures are sealed to the drywall
- ☒ Any other penetrations to the drywall (i.e. fire sprinklers, whole house fans, surround sound speakers, etc.)
- ☒ Attic access door is installed with weather stripping

### **Wall Penetrations**

- ☒ All electrical outlets and switches are installed and sealed
- ☒ Any other penetrations to the drywall on the exterior need to be sealed

### **General inspections**

- ☒ Flooring is installed
- ☒ Weather stripping is installed